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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

AN, SANG WOOK

ART UNIT PAPER NUMBER

1732

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/731,244	Applicant(s) COWELCHUK ET AL.	
	Examiner Sang W. An	Art Unit 1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 10 is objected to because of the following informalities: the word "bag" should be inserted in between "air" and "assembly" in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claims 4 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 4 and 13 recite the limitation "the second mold structure" in second line of the claims. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 8, 9, 11, 12, 15, 16, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Gallagher et al (US 6460880).

Regarding claim 1, Gallagher teaches a method of forming an airbag assembly

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and trim component for a vehicle comprising: (a) providing a substrate (col 8 lines 28-32, fig 6, **10**); (b) providing a first mold structure having a first surface formed therein (col 8 lines 41-45, fig 6, **72**) ; (c) positioning the first mold structure relative to the substrate such that the first surface and the substrate are in a spaced relationship with one another to define a first cavity (col 8 lines 41-45, fig 6, **74**); (d) introducing a first material into the first cavity to form a first portion of an airbag assembly overmolded to the substrate to produce the airbag assembly and trim component (col 8 lines 61-65).

Regarding claim 2, Gallagher teaches molding an outer layer, such that the outer layer is overmolded to a portion of the substrate (col 11 lines 8-9, fig 14, **122**).

Regarding claim 3, Gallagher teaches that the outer layer and the first portion of the airbag assembly are formed of the same material (col 11 line 7 & col 6 line 26).

Regarding claim 8, Gallagher teaches that providing the substrate includes providing a first substrate mold structure having a first substrate mold surface formed therein, providing a second substrate mold structure having a second substrate mold surface formed therein, positioning the first mold structure relative to the second mold structure, such that the first substrate mold surface and the second substrate mold surface are in a spaced relationship with one another to define a substrate cavity, and introducing a substrate material into the substrate cavity to form the substrate (col 8 lines 28-38).

Regarding claim 9, Gallagher teaches that the substrate material is different from the first material, and wherein the first material and substrate material are compatible,

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such that the first material and second material may be overmolded to one another (col 4 lines 32-35).

Regarding claim 11, Gallagher teaches that the first material is made of a material selected from the group consisting of thermoplastic elastomer, thermoplastic elastomer olefin, thermoplastic elastomer polyolefin, Santoprene® , styrene maleic anhydride, Dylark®, polycarbonate, polypropylene, acrylonitrile, butadiene styrene, styrene maleic anhydride, polyphenylene oxide, nylon, polyester, acrylic, polysulfone, thermoplastic polyether, thermoplastic urethane, polypropylene, polyurethane, copolyester, thermoplastic styrenic elastomer, and nylon (col 9 lines 54-59).

Regarding claim 12, Gallagher teaches that the substrate material is made of a material selected from the group consisting of thermoplastic elastomer, thermoplastic elastomer olefin, thermoplastic elastomer polyolefin, Santoprene® , styrene maleic anhydride, Dylark®, polycarbonate, polypropylene, acrylonitrile, butadiene styrene, styrene maleic anhydride, polyphenylene oxide, nylon, polyester, acrylic, polysulfone, thermoplastic polyether, thermoplastic urethane, polypropylene, polyurethane, copolyester, thermoplastic styrenic elastomer, and nylon (col 6 lines 24-26).

Regarding claim 15, Gallagher teaches that the first portion of the airbag assembly and the second portion of the airbag assembly defines one of hinge and a chute (fig 15, **51c & 114**).

Regarding claim 16, Gallagher teaches attaching a portion of hinge to a portion of the chute (fig 15).

Regarding claim 19, Gallagher teaches scoring a portion of the exposed portion of the substrate to form an airbag door (col1 line 39, fig 15, 16c).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gallagher (US 6460880) in view of Kieltyka et al (US 20030164577).

Gallagher teaches everything mentioned above in the 102(b) rejection but does not teach the aspects disclosed in claims 4 and 7. However, regarding claim 4, Kieltyka et al teach replacing the second mold structure with a third mold structure having a second surface, such that the second surface of the third mold structure and the substrate are in a spaced relationship with one another to define a second cavity (par 0017), and the first surface of the first mold structure and the substrate are in a spaced relationship with one another to define the first cavity (par 0017), and wherein step (d)

further includes introducing the first material into the second cavity to form the outer layer overmolded to the substrate, such that the outer layer and the portion of the airbag assembly are formed substantially simultaneously (par 0018).

Furthermore, regarding claim 7, Kieltyka teaches providing a third mold structure having a second surface formed therein; positioning the third mold structure relative to the substrate such that the third surface and the substrate are in a spaced relationship with one another to define a second cavity (par 0017); and introducing a second material into the second cavity to form an outer layer overmolded to the substrate (par 0018 & 0014). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use Kieltyka's teaching in Gallagher's process in order to form an additional outer overmold.

6. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gallagher (US 6460880) in view of Kieltyka (20030164577) further in view Schiewe et al (US 6093358).

Gallagher in view of Kieltyka teaches everything mentioned above but does not teach aspects disclosed in claims 5 and 6. However, regarding claim 5, Schiewe et al teach that the first cavity and the second cavity are communicably connected, such that material introduced into one of the first cavity and the second cavity flows into the other of the first cavity and the second cavity (col 3 lines 6-31, fig 3A). Furthermore, regarding claim 6, Schiewe et al teach that the forming at least one aperture through the substrate, such that the at least one aperture provides the communicable connection between the first cavity and the second cavity (col 3 lines 6-31, fig 3A, **22**). Therefore it

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would have been obvious to one of ordinary skill in the art at the time of invention to use Schiewe's teaching in Gallagher's method of forming an airbag assembly and vehicle trim component, in view of Kieltyka, in order to assist in holding the expandable material to the plastic support structure (abstract).

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gallagher in view Hallard et al (US 5346249).

Gallagher teaches everything mentioned above but does not teach aspects of claim 10. However, Hallard et al teach positioning a sheet of scrim material within a portion of the second cavity, such that the scrim material will be embedded within at least a portion of the first portion of the air bag assembly (col 3 lines 29-50). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use Hallard's teaching in Gallagher's method of forming an airbag assembly and vehicle trim component in order to provide supplemental support during inflation (col 1 lines 51-53).

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gallagher (US 6460880).

Gallagher teaches every mentioned above in the 102(b) rejection, but does not explicitly teach the aspects in claim 13. However Gallagher does teach a multilayered cover assembly **10** having a urethane foam layer **120** and a plastic skin layer **122b** (fig 14). In addition, Gallagher explicitly teaches overmolding the cover assembly **10** and tethering layer **52** by sequentially forming two distinct cavities in two distinct steps (col 8 28-57). Thus Gallagher clearly suggests that the foam and plastic skin layer would

have been overmolded by the same process as described in column 8 lines 28-57.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use Gallagher's teachings and embodiments in order to add multiple layers of material in the airbag assembly.

9. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gallagher (US 6460880) in view of Hallard et al (US 5346249).

Gallagher teaches everything mentioned above but does not teach aspects in claim 14. However, Hallard teaches positioning a sheet of scrim material within the second cavity such that the scrim material will be embedded within the second portion of the airbag assembly (col 3 lines 29-50), wherein the first portion of the airbag assembly defines a chute and the second portion of the airbag assembly defines a hinge (fig 4, col 6 lines 13-17). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use Hallard's teaching in Gallagher's method of forming an airbag assembly and vehicle trim component in order to provide supplemental support during inflation (col 1 lines 51-53).

10. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gallagher (US 6460880) in view of Kinane (US 20030080540).

Gallagher teaches everything mentioned above but does not teach the aspects in claims 17 and 18. However, regarding claim 17, Kinane teaches forming an aperture in the hinge, further wherein a portion of the chute is disposed within the aperture to secure a portion of the hinge to the chute (fig 1, 50, par 0015).

Furthermore, regarding claim 18, Kinane teaches that the aperture is

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elongated (fig 1, **37**) such that the hinge is movable between a retracted position and an extended position relative to the chute, such that the hinge may be movable to the extended position when the airbag is deployed and the airbag door is removed from the trim component to allow the airbag door to swing further outward from the chute (par 0013). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use Kinane's teaching in Gallagher's method of forming an airbag assembly and vehicle trim component in order to attach the hinge to the chute and pivotally attach the door portion to the hinge (abstract).

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gallagher (US 6460880).

Gallagher teaches providing a first mold structure having a first surface formed therein, a second mold structure having a second surface formed therein, a third mold structure having a third surface formed therein; positioning the first mold structure relative to the second mold structure such that the first and second surfaces are in a spaced relationship with one another to define a first cavity; introducing a first material into the first cavity to form a substrate for a trim component; positioning the second mold structure away from the substrate; positioning a third mold structure relative to the first mold structure such that the third surface and the substrate are in a spaced relationship with one another to define a second cavity; introducing a second material into the second cavity to form an outer layer overmolded onto the substrate, (col 8 lines 28-57); wherein the second material has a different tactile characteristic than the first

material, and the first material has a generally rigid characteristic for structurally supporting the second material (col 2 lines 19-38).

However Gallagher does not explicitly teach a fourth mold structure having a fourth mold surface formed therein and positioning a fourth mold structure relative to the second mold structure such that the fourth surface and the substrate are in a spaced relationship with one another to define a third cavity; and introducing a third material into the third cavity to form a portion of an airbag assembly overmolded onto the substrate, wherein the third material is different from the second material, and wherein the fourth mold structure includes a portion which covers an exposed portion of the substrate to prevent the third material from overmolding onto the substrate when the third material is introduced into the third cavity.

Nevertheless Gallagher does teach a multilayered cover assembly **10** having a urethane foam layer **120** and a plastic skin layer **122b** (fig 14). In addition, Gallagher explicitly teaches overmolding the cover assembly **10** and tethering layer **52** by sequentially forming two distinct cavities in two distinct steps (col 8 28-57). Thus Gallagher clearly suggests that the foam and plastic skin layer would have been overmolded by the same process as described in column 8 lines 28-57. The addition of the foam and plastic skin layer would require a fourth mold structure and a third material such as urethane foam (col 11 line 7). Gallagher also teaches covering an exposed portion of the substrate to prevent the second material from overmolding onto the substrate when the second material is introduced into the second cavity (fig 6, **72**). This teaching could be applied to the third cavity as well. Therefore it would have been

obvious to one of ordinary skill in the art at the time of invention to use Gallagher's teachings and embodiments in order to add multiple layers of material in the airbag assembly.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang W. An whose telephone number is (571) 272-1997. The examiner can normally be reached on Mon-Fri 7 AM - 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on (571) 272-1196. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sang Wook An
Patent Examiner
Art Unit 1732
January 4, 2006



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SUPERVISORY PATENT EXAMINER